

ASSIGNMENTPage 1 of 4
PD-A96003

WHEREAS, I, as below named sole inventor (if only one name is listed below) or joint inventor (if plural names are listed below) of the city and state as stated below next to my name, have invented a(an)

AIRBORNE SATELLITE TELEVISION SYSTEM

for which application for Letters Patent of the United States has been executed by me on this day, or (if the following is completed) filed on June 19, 1996 as Serial No. 08/667,222; and

WHEREAS, **HE Holdings, Inc., doing business as Hughes Electronics**, (hereinafter referred to as **HUGHES ELECTRONICS**), a Delaware Corporation, having its principal place of business in Los Angeles, California, is desirous of acquiring the entire and exclusive right, title and interest in, to and under said invention, said application and any and all Letters Patent that may be granted therefor in the United States and throughout the world;

NOW, THEREFORE, in consideration of the obligations voluntarily assumed by me and set forth in an invention agreement between me and my employer, effective the date as stated below next to my name, and other good and valuable consideration, receipt of which is hereby acknowledged, I do hereby sell, assign and transfer to **HUGHES ELECTRONICS**, its successors, assigns or other legal representatives, the entire and exclusive right, title and interest in and to said invention invented by me, to said application and any and all applications which are continuations, continuations-in-part, divisions or substitutes of said application and any and all Letters Patent that may be granted therefor in the United States and throughout the world on any of said applications and to any and all reexaminations, reissues, renewals or extensions of said Letters Patent in the United States and throughout the world for the full term or terms for which said Letters patent may be granted in the United States and throughout the world; authorize and request The Commissioner of Patents and Trademarks of the United States and all foreign countries to issue all such Letters Patent to said **HUGHES ELECTRONICS**, its successors, assigns or other legal representatives; covenant that no assignment, sale, agreement, transfer or encumbrance has been, or will be, made or entered into which would conflict with this assignment, sale and transfer; and agree to communicate to **HUGHES ELECTRONICS**, its successors, assigns or other legal representatives, upon request and at no cost or expense to me, any facts known by me respecting said invention, do all lawful acts, including the execution and delivery of all papers and proper oaths and giving of testimony that is deemed necessary or desirable by **HUGHES ELECTRONICS**, its successors, assigns or other legal representatives with regard to said invention for protecting, obtaining, maintaining and enforcing any and all of said Letters Patent in the United States and throughout the world for said invention and for perfecting, affirming, recording and maintaining the title of **HUGHES ELECTRONICS**, its successors, assigns or other legal representatives, and generally cooperate to the fullest extent in all matters pertaining to said invention, and any and all of said Letters Patent and the title thereto in **HUGHES ELECTRONICS**, its successors, assigns or other legal representatives.



UNITED STATES DEPARTMENT OF COMMERCE
Patent and Trademark Office
ASSISTANT SECRETARY AND COMMISSIONER
OF PATENTS AND TRADEMARKS
Washington, D.C. 20231

MARCH 19, 1999

PTAS
ROCKWELL INTERNATIONAL CORPORATION
L. KEITH STEPHENS
WORLD HEADQUARTERS
600 ANTON BOULEVARD, SUITE 700
COSTA MESA, CA 92628-5090



100914927A

UNITED STATES PATENT AND TRADEMARK OFFICE
NOTICE OF RECORDATION OF ASSIGNMENT DOCUMENT

THE ENCLOSED DOCUMENT HAS BEEN RECORDED BY THE ASSIGNMENT DIVISION OF THE U.S. PATENT AND TRADEMARK OFFICE. A COMPLETE MICROFILM COPY IS AVAILABLE AT THE ASSIGNMENT SEARCH ROOM ON THE REEL AND FRAME NUMBER REFERENCED BELOW.

PLEASE REVIEW ALL INFORMATION CONTAINED ON THIS NOTICE. THE INFORMATION CONTAINED ON THIS RECORDATION NOTICE REFLECTS THE DATA PRESENT IN THE PATENT AND TRADEMARK ASSIGNMENT SYSTEM. IF YOU SHOULD FIND ANY ERRORS OR HAVE QUESTIONS CONCERNING THIS NOTICE, YOU MAY CONTACT THE EMPLOYEE WHOSE NAME APPEARS ON THIS NOTICE AT 703-308-9723. PLEASE SEND REQUEST FOR CORRECTION TO: U.S. PATENT AND TRADEMARK OFFICE, ASSIGNMENT DIVISION, BOX ASSIGNMENTS, CG-4, 1213 JEFFERSON DAVIS HWY, SUITE 320, WASHINGTON, D.C. 20231.

RECORDATION DATE: 01/13/1998

REEL/FRAME: 9614/0073
NUMBER OF PAGES: 13

BRIEF: ASSIGNMENT OF ASSIGNOR'S INTEREST (SEE DOCUMENT FOR DETAILS).

ASSIGNOR:

HUGHES ELECTRONICS CORPORATION

DOC DATE: 12/15/1997

ASSIGNEE:

ROCKWELL INTERNATIONAL CORPORATION
600 ANTON BOULEVARD, SUITE 700
COSTA MESA, CALIFORNIA 92626

SERIAL NUMBER: 08832149
PATENT NUMBER:

FILING DATE: 04/02/1997
ISSUE DATE:

SERIAL NUMBER: 08864596
PATENT NUMBER:

FILING DATE: 05/28/1997
ISSUE DATE:

SERIAL NUMBER: 08865815
PATENT NUMBER:

FILING DATE: 05/30/1997
ISSUE DATE:

SERIAL NUMBER: 08865776
PATENT NUMBER:

FILING DATE: 05/30/1997
ISSUE DATE:

9614/0073 PAGE 2

SERIAL NUMBER: 08865816
PATENT NUMBER:

FILING DATE: 05/30/1997
ISSUE DATE:

SERIAL NUMBER: 07686076
PATENT NUMBER:

FILING DATE: 04/16/1991
ISSUE DATE:

SERIAL NUMBER: 07673125
PATENT NUMBER:

FILING DATE: 03/20/1991
ISSUE DATE:

SERIAL NUMBER: 07579335
PATENT NUMBER:

FILING DATE: 09/06/1990
ISSUE DATE:

SERIAL NUMBER: 08430006
PATENT NUMBER:

FILING DATE: 04/26/1995
ISSUE DATE:

SERIAL NUMBER: 08441144
PATENT NUMBER:

FILING DATE: 05/15/1995
ISSUE DATE:

SERIAL NUMBER: 08780558
PATENT NUMBER: 5808661

FILING DATE: 01/08/1997
ISSUE DATE: 09/15/1998

SERIAL NUMBER: 08757721
PATENT NUMBER:

FILING DATE: 11/27/1996
ISSUE DATE:

SERIAL NUMBER: 08667222
PATENT NUMBER: 5790175

FILING DATE: 06/19/1996
ISSUE DATE: 08/04/1998

SERIAL NUMBER: 08667225
PATENT NUMBER: 5760819

FILING DATE: 06/19/1996
ISSUE DATE: 06/02/1998

SERIAL NUMBER: 08667224
PATENT NUMBER: 5801751

FILING DATE: 06/19/1996
ISSUE DATE: 09/01/1998

SERIAL NUMBER: 07630713
PATENT NUMBER: 5123015

FILING DATE: 12/20/1990
ISSUE DATE: 06/16/1992

SERIAL NUMBER: 07681850
PATENT NUMBER: 5220419

FILING DATE: 04/08/1991
ISSUE DATE: 06/15/1993

SERIAL NUMBER: 07681838
PATENT NUMBER: 5214505

FILING DATE: 04/08/1991
ISSUE DATE: 05/25/1993

SERIAL NUMBER: 07836683
PATENT NUMBER: 5289272

FILING DATE: 02/18/1992
ISSUE DATE: 02/22/1994

SERIAL NUMBER: 07847423
PATENT NUMBER: 5179447

FILING DATE: 03/05/1992
ISSUE DATE: 01/12/1993

SERIAL NUMBER: 07524673
PATENT NUMBER: 5055660

FILING DATE: 05/15/1990
ISSUE DATE: 10/08/1991

SERIAL NUMBER: 07318592
PATENT NUMBER: 5057677

FILING DATE: 06/16/1988
ISSUE DATE: 10/15/1991

PAGE: 1

PATENT NUMBER: 5790175 ISSUE DATE: 08/04/98
SERIAL NUMBER: 08/667222 FILING DATE: 06/19/96
TITLE: AIRCRAFT SATELLITE TELEVISION SYSTEM FOR DISTRIBUTING TELEVISIO
N PROGRAMMING DERIVED FROM DIRECT BROADCAST SATELLITES

APPLICANT: SKLAR, RICHARD E. ; GIRARD, LAWRENCE E.
PHILLIPP, RALPH P. ; FRANKENBACH, DAVID C. ; BERRY, DICKE
WILLIAMS, JIM C.

REEL: 008180 FRAME: 0872 DATE RECORDED: 10/15/96 NUMBER OF PAGES: 00
ASSIGNOR: SKLAR, RICHARD E.

EXC DATE: 09/27/96
GIRARD, LAWRENCE E.
EXC DATE: 09/27/96
PHILLIPP, RALPH P.
EXC DATE: 09/27/96

PRESS XMIT FOR NEXT PAGE OR FOR A SPECIFIC PAGE
ENTER PAGE NUMBER (2 DIGITS MAX.), PRESS XMIT

05/02/00 09:35
PAGE: 2

BERRY, DICKEY J.
EXC DATE: 09/27/96
WILLIAMS, JIM C.
EXC DATE: 10/10/96

ASSIGNEE: HUGHES ELECTRONICS
BLDG. C01, M/S A126
7200 HUGHES TERRACE
LOS ANGELES, CALIFORNIA 90045

BRIEF: ASSIGNMENT OF ASSIGNOR'S INTEREST (SEE DOCUMENT FOR DETAILS).
RETURN ADDRESS: HUGHES ELECTRONICS
7200 HUGHES TERRACE
BLDG. C01, M/S A126
LOS ANGELES, CA 90045

REEL: 008180 FRAME: 0866 DATE RECORDED: 10/15/96 NUMBER OF PAGES: 00
ASSIGNOR: FRANKENBACH, DAVID C.
EXC DATE: 09/30/96

PRESS XMIT FOR NEXT PAGE OR FOR A SPECIFIC PAGE
ENTER PAGE NUMBER (2 DIGITS MAX.), PRESS XMIT

05/02/00 09:35



PAGE: 3

ASSIGNEE: HUGHES ELECTRONICS
BLDG. C01, M/S A126
7200 HUGHES TERRACE
LOS ANGELES, CALIFORNIA 90045

BRIEF: ASSIGNMENT OF ASSIGNOR'S INTEREST (SEE DOCUMENT FOR DETAILS).

RETURN ADDRESS: HUGHES ELECTRONICS
GEORGANN S. GRUNEBACH
7200 HUGHES TERRACE
BLDG. C01, M/S A126
LOS ANGELES, CA 90045

REEL: 008886 FRAME: 0092 DATE RECORDED: 01/13/98 NUMBER OF PAGES: 01

ASSIGNOR: HUGHES ELECTRONICS CORPORATION

EXC DATE: 12/15/97

ASSIGNEE: ROCKWELL INTERNATIONAL CORPORATION
SUITE 700
600 ANTON BOULEVARD
COSTA MESA, CALIFORNIA 92626

PRESS XMIT FOR NEXT PAGE OR FOR A SPECIFIC PAGE

ENTER PAGE NUMBER (2 DIGITS MAX.), PRESS XMIT

05/02/00 09:35

PAGE: 4

BRIEF: ASSIGNMENT OF ASSIGNOR'S INTEREST (SEE DOCUMENT FOR DETAILS).

RETURN ADDRESS: ROCKWELL INTERNATIONAL CORPORATION

L. KEITH STEPHENS, D/876 CM74
WORLD HEADQUARTERS
600 ANTON BOULEVARD, SUITE 700
COSTA MESA, CA 92628-5090

REEL: 008907 FRAME: 0819 DATE RECORDED: 01/13/98 NUMBER OF PAGES: 01

ASSIGNOR: HUGHES ELECTRONICS CORPORATION

EXC DATE: 12/15/97

ASSIGNEE: ROCKWELL INTERNATIONAL CORPORATION
SUITE 700
600 ANTON BOULEVARD
COSTA MESA, CALIFORNIA 92626

BRIEF: ASSIGNMENT OF ASSIGNOR'S INTEREST (SEE DOCUMENT FOR DETAILS).

PRESS XMIT FOR NEXT PAGE OR FOR A SPECIFIC PAGE

ENTER PAGE NUMBER (2 DIGITS MAX.), PRESS XMIT

05/02/00 09:36

PAGE: 5

RETURN ADDRESS: ROCKWELL INTERNATIONAL CORPORATION
L. KEITH STEPHENS, D/876 CM74
WORLD HEADQUARTERS
600 ANTON BOULEVARD, SUITE 700
COSTA MESA, CA 92628-5090

REEL: 008907 FRAME: 0832 DATE RECORDED: 01/13/98 NUMBER OF PAGES: 01
ASSIGNOR: HUGHES ELECTRONICS CORPORATION

EXC DATE: 12/15/97

ASSIGNEE: ROCKWELL INTERNATIONAL CORPORATION
600 ANTON BOULEVARD, SUITE 700
COSTA MESA, CALIFORNIA 92626

BRIEF: ASSIGNMENT OF ASSIGNOR'S INTEREST (SEE DOCUMENT FOR DETAILS).

RETURN ADDRESS: ROCKWELL INTERNATIONAL CORPORATION
L. KEITH STEPHENS, D/876 CM74
WORLD HEADQUARTERS
600 ANTON BOULEVARD, SUITE 700
COSTA MESA, CA 92628-5090

PRESS XMIT FOR NEXT PAGE OR FOR A SPECIFIC PAGE
ENTER PAGE NUMBER (2 DIGITS MAX.), PRESS XMIT

05/02/00 09:37

PAGE: 6

REEL: 008907 FRAME: 0850 DATE RECORDED: 01/13/98 NUMBER OF PAGES: 01
ASSIGNOR: HUGHES ELECTRONICS CORPORATION

EXC DATE: 12/15/97

ASSIGNEE: ROCKWELL INTERNATIONAL CORPORATION
SUITE 700
600 ANTON BOULEVARD
COSTA MESA, CALIFORNIA 92626

BRIEF: ASSIGNMENT OF ASSIGNOR'S INTEREST (SEE DOCUMENT FOR DETAILS).

RETURN ADDRESS: ROCKWELL INTERNATIONAL CORPORATION
L. KEITH STEPHENS
WORLD HEADQUARTERS
600 ANTON BLVD., SUITE 700
COSTA MESA, CA 92628-5090

REEL: 008907 FRAME: 0865 DATE RECORDED: 01/13/98 NUMBER OF PAGES: 01
ASSIGNOR: HUGHES ELECTRONICS CORPORATION

EXC DATE: 12/15/97

PRESS XMIT FOR NEXT PAGE OR FOR A SPECIFIC PAGE
ENTER PAGE NUMBER (2 DIGITS MAX.), PRESS XMIT

05/02/00 09:37

ASSIGNEE: ROCKWELL INTERNATIONAL CORPORATION
600 ANTON BOULEVARD, SUITE 700
COSTA MESA, CALIFORNIA 92626

PAGE: 7

BRIEF: ASSIGNMENT OF ASSIGNOR'S INTEREST (SEE DOCUMENT FOR DETAILS).
RETURN ADDRESS: ROCKWELL INTERNATIONAL CORPORATION

L. KEITH STEPHENS
WORLD HEADQUARTERS
600 ANTON BOULEVARD, SUITE 700
COSTA MESA, CA 92628-5090

REEL: 008907 FRAME: 0878 DATE RECORDED: 01/13/98 NUMBER OF PAGES: 01
ASSIGNOR: HUGHES ELECTRONICS CORPORATION

EXC DATE: 12/15/97

ASSIGNEE: ROCKWELL INTERNATIONAL CORPORATION
SUITE 700

600 ANTON BOULEVARD
COSTA MESA, CALIFORNIA 92626

BRIEF: ASSIGNMENT OF ASSIGNOR'S INTEREST (SEE DOCUMENT FOR DETAILS).

PRESS XMIT FOR NEXT PAGE OR FOR A SPECIFIC PAGE
ENTER PAGE NUMBER (2 DIGITS MAX.), PRESS XMIT

05/02/00 09:38

PAGE: 8

RETURN ADDRESS: ROCKWELL INTERNATIONAL CORPORATION
L. KEITH STEPHENS, D/876 CM74
WORLD HEADQUARTERS
600 ANTON BOULEVARD, SUITE 700
COSTA MESA, CA 92628-5090

REEL: 008907 FRAME: 0892 DATE RECORDED: 01/13/98 NUMBER OF PAGES: 01
ASSIGNOR: HUGHES ELECTRONICS CORPORATION

EXC DATE: 12/15/97

ASSIGNEE: ROCKWELL INTERNATIONAL CORPORATION
SUITE 700

600 ANTON BOULEVARD
COSTA MESA, CALIFORNIA 92626

BRIEF: ASSIGNMENT OF ASSIGNOR'S INTEREST (SEE DOCUMENT FOR DETAILS).

PRESS XMIT FOR NEXT PAGE OR FOR A SPECIFIC PAGE
ENTER PAGE NUMBER (2 DIGITS MAX.), PRESS XMIT

05/02/00 09:38

PAGE: 9

RETURN ADDRESS: ROCKWELL INTERNATIONAL CORPORATION
L. KEITH STEPHENS
D/876 CM74 - SUITE 700
WORLD HEADQUARTERS, 600 ANTON BLVD.
COSTA MESA, CA 92628-5090

REEL: 008907 FRAME: 0907 DATE RECORDED: 01/13/98 NUMBER OF PAGES: 01
ASSIGNOR: HUGHES ELECTRONICS CORPORATION

EXC DATE: 12/15/97

ASSIGNEE: ROCKWELL INTERNATIONAL CORPORATION
600 ANTON BOULEVARD, SUITE 700
COSTA MESA, CALIFORNIA 92626

BRIEF: ASSIGNMENT OF ASSIGNOR'S INTEREST (SEE DOCUMENT FOR DETAILS).

RETURN ADDRESS: ROCKWELL INTERNATIONAL CORPORATION
L. KEITH STEPHENS, D/876 CM74
WORLD HEADQUARTERS
600 ANTON BOULEVARD, SUITE 700
COSTA MESA, CALIFORNIA 92628-5090

PRESS XMIT FOR NEXT PAGE OR FOR A SPECIFIC PAGE
ENTER PAGE NUMBER (2 DIGITS MAX.), PRESS XMIT

05/02/00 09:39
PAGE: 10

REEL: 008907 FRAME: 0933 DATE RECORDED: 01/13/98 NUMBER OF PAGES: 01
ASSIGNOR: HUGHES ELECTRONICS CORPORATION

EXC DATE: 12/15/97

ASSIGNEE: ROCKWELL INTERNATIONAL CORPORATION
600 ANTON BOULEVARD, SUITE 700
COSTA MESA, CALIFORNIA 92626

BRIEF: ASSIGNMENT OF ASSIGNOR'S INTEREST (SEE DOCUMENT FOR DETAILS).

RETURN ADDRESS: ROCKWELL INTERNATIONAL CORPORATION
L. KEITH STEPHENS, D/876 CM74
WORLD HEADQUARTERS
600 ANTON BOULEVARD, SUITE 700
COSTA MESA, CA 92628-5090

REEL: 008955 FRAME: 0171 DATE RECORDED: 01/13/98 NUMBER OF PAGES: 01
ASSIGNOR: HUGHES ELECTRONICS CORPORATION

EXC DATE: 12/15/97

PRESS XMIT FOR NEXT PAGE OR FOR A SPECIFIC PAGE
ENTER PAGE NUMBER (2 DIGITS MAX.), PRESS XMIT

05/02/00 09:40

PAGE: 13

REEL: 009614 FRAME: 0073 DATE RECORDED: 01/13/98 NUMBER OF PAGES: 01
ASSIGNOR: HUGHES ELECTRONICS CORPORATION

EXC DATE: 12/15/97

ASSIGNEE: ROCKWELL INTERNATIONAL CORPORATION
600 ANTON BOUELVARD, SUITE 700
COSTA MESA, CALIFORNIA 92626

BRIEF: ASSIGNMENT OF ASSIGNOR'S INTEREST (SEE DOCUMENT FOR DETAILS).

RETURN ADDRESS: ROCKWELL INTERNATIONAL CORPORATION
L. KEITH STEPHENS
WORLD HEADQUARTERS
600 ANTON BOULEVARD, SUITE 700
COSTA MESA, CA 92628-5090

*** LAST PAGE *** ENTER PAGE NUMBER (2 DIGITS MAX.)
AND PRESS XMIT TO GO BACK TO DESIRED PAGE

05/02/00 09:41

9614/0073 PAGE 3

SERIAL NUMBER: 07908095
PATENT NUMBER: 5311302

FILING DATE: 07/02/1992
ISSUE DATE: 05/10/1994

SERIAL NUMBER: 07907883
PATENT NUMBER: 5262762

FILING DATE: 07/02/1992
ISSUE DATE: 11/16/1993

SERIAL NUMBER: 08054498
PATENT NUMBER: 5374103

FILING DATE: 04/22/1993
ISSUE DATE: 12/20/1994

SERIAL NUMBER: 08194559
PATENT NUMBER: 5467106

FILING DATE: 02/10/1994
ISSUE DATE: 11/14/1995

SERIAL NUMBER: 08156161
PATENT NUMBER: 5421530

FILING DATE: 11/23/1993
ISSUE DATE: 06/06/1995

SHARMALLA COATES, EXAMINER
ASSIGNMENT DIVISION
OFFICE OF PUBLIC RECORDS

IN WITNESS WHEREOF, I have executed this instrument.

FULL NAME OF SOLE OR JOINT INVENTOR	INVENTOR'S SIGNATURE	DATE
Richard E. Sklar		
RESIDENCE (CITY AND STATE)	INVENTION AGREEMENT DATE	
Huntington Beach, California	January 23, 1967	
FULL NAME OF SOLE OR JOINT INVENTOR	INVENTOR'S SIGNATURE	DATE
Lawrence E. Girard		
RESIDENCE (CITY AND STATE)	INVENTION AGREEMENT DATE	
Westminster, California	January 17, 1977	
FULL NAME OF SOLE OR JOINT INVENTOR	INVENTOR'S SIGNATURE	DATE
Ralph P. Phillipp		
RESIDENCE (CITY AND STATE)	INVENTION AGREEMENT DATE	
La Habra Heights, California	January 8, 1996	
FULL NAME OF SOLE OR JOINT INVENTOR	INVENTOR'S SIGNATURE	DATE
David C. Frankenbach	<i>David C. Frankenbach</i>	9/3/96
RESIDENCE (CITY AND STATE)	INVENTION AGREEMENT DATE	
La Habra Heights, California	June 27, 1977	
FULL NAME OF SOLE OR JOINT INVENTOR	INVENTOR'S SIGNATURE	DATE
Dickey J. Berry		
RESIDENCE (CITY AND STATE)	INVENTION AGREEMENT DATE	
La Verne, California	January 31, 1983	
FULL NAME OF SOLE OR JOINT INVENTOR	INVENTOR'S SIGNATURE	DATE
Jim C. Williams		
RESIDENCE (CITY AND STATE)	INVENTION AGREEMENT DATE	
Anaheim, California	June 24, 1982	

STATE OF CALIFORNIA)

COUNTY OF LOS ANGELES)

SS:

On 9-30-96 before me, SALLY ALCALAY,

a Notary Public in and for said State, personally appeared DAVID C. FRANKENBACH,

☐ personally known to me or ☐ proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

WITNESS my hand and official seal.



Notary Public

[Signature]

IN WITNESS WHEREOF, I have executed this instrument.

FULL NAME OF SOLE OR JOINT INVENTOR Richard E. Sklar	INVENTOR'S SIGNATURE <i>Richard E. Sklar</i>	DATE 9/27/96
RESIDENCE (CITY AND STATE) Huntington Beach, California		INVENTION AGREEMENT DATE January 23, 1967
FULL NAME OF SOLE OR JOINT INVENTOR Lawrence E. Girard	INVENTOR'S SIGNATURE <i>Lawrence E. Girard</i>	DATE 9/27/96
RESIDENCE (CITY AND STATE) Westminster, California		INVENTION AGREEMENT DATE January 17, 1977
FULL NAME OF SOLE OR JOINT INVENTOR Ralph P. Phillipp	INVENTOR'S SIGNATURE <i>Ralph P. Phillipp</i>	DATE 9/27/96
RESIDENCE (CITY AND STATE) La Habra Heights, California		INVENTION AGREEMENT DATE March 25, 1996
FULL NAME OF SOLE OR JOINT INVENTOR David C. Frankenbach	INVENTOR'S SIGNATURE	DATE
RESIDENCE (CITY AND STATE) La Habra Heights, California		INVENTION AGREEMENT DATE June 27, 1977
FULL NAME OF SOLE OR JOINT INVENTOR Dickey J. Berry	INVENTOR'S SIGNATURE <i>Dickey J. Berry</i>	DATE 9/27/96
RESIDENCE (CITY AND STATE) La Verne, California		INVENTION AGREEMENT DATE January 31, 1983
FULL NAME OF SOLE OR JOINT INVENTOR Jim C. Williams	INVENTOR'S SIGNATURE <i>Jim C. Williams</i>	DATE 10/10/96
RESIDENCE (CITY AND STATE) Anaheim, California		INVENTION AGREEMENT DATE June 24, 1982

STATE OF CALIFORNIA)

COUNTY OF Los Angeles)

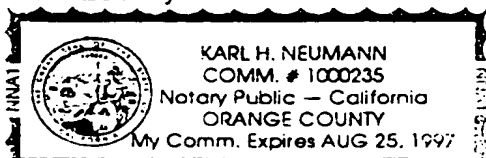
SS:

On Sept. 27, 1996 before me, KARL H. NEUMANN,

a Notary Public in and for said State, personally appeared RICHARD E. SKLAR,

☐ personally known to me or ☒ proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

WITNESS my hand and official seal.



Notary Public

Karl H. Neumann

STATE OF CALIFORNIA)
COUNTY OF Los Angeles) SS:

On Sept. 27, 1996 before me, KARL H. NEUMANN
a Notary Public in and for said State, personally appeared LAWRENCE E. GIRARD

☐ personally known to me or ☒ proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is / are subscribed to the within instrument and acknowledged to me that he / she / they executed the same in his / her / their authorized capacity(ies), and that by his / her / their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

WITNESS my hand and official seal.



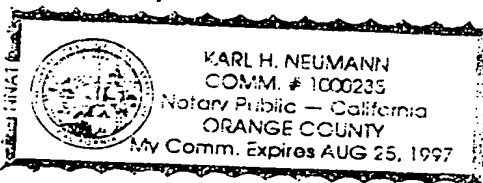
Notary Public Karl H. Neumann

STATE OF CALIFORNIA)
COUNTY OF Los Angeles) SS:

On Sept. 27, 1996 before me, KARL H. NEUMANN
a Notary Public in and for said State, personally appeared RALPH P. PHILLIPP

☐ personally known to me or ☒ proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is / are subscribed to the within instrument and acknowledged to me that he / she / they executed the same in his / her / their authorized capacity(ies), and that by his / her / their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

WITNESS my hand and official seal.



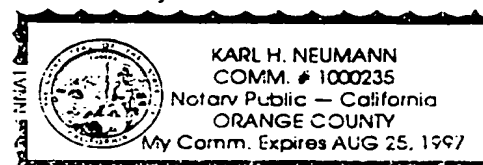
Notary Public Karl H. Neumann

STATE OF CALIFORNIA)
COUNTY OF Los Angeles) SS:

On Sept. 27, 1996 before me, KARL H. NEUMANN
a Notary Public in and for said State, personally appeared DICKEY J. BERRY

☐ personally known to me or ☒ proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is / are subscribed to the within instrument and acknowledged to me that he / she / they executed the same in his / her / their authorized capacity(ies), and that by his / her / their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

WITNESS my hand and official seal.



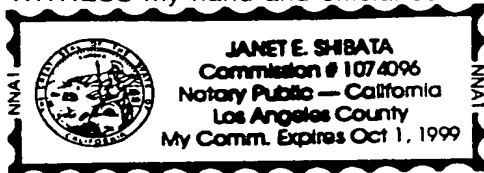
Notary Public Karl H. Neumann

STATE OF CALIFORNIA)
COUNTY OF LOS ANGELES) SS:

On OCTOBER 10, 1996 before me, JANET E. SHIBATA
a Notary Public in and for said State, personally appeared JIM C. WILLIAMS

☐ personally known to me or ☒ proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is / are subscribed to the within instrument and acknowledged to me that he / she / they executed the same in his / her / the authorized capacity(ies), and that by his / her / their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

WITNESS my hand and official seal.



Notary Public

Janet E. Shibata

STATE OF _____)
COUNTY OF _____) SS:

On _____ before me, _____
a Notary Public in and for said State, personally appeared _____

☐ personally known to me or ☐ proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is / are subscribed to the within instrument and acknowledged to me that he / she / they executed the same in his / her / the authorized capacity(ies), and that by his / her / their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

WITNESS my hand and official seal.

Notary Public _____

STATE OF _____)
COUNTY OF _____) SS:

On _____ before me, _____
a Notary Public in and for said State, personally appeared _____

☐ personally known to me or ☐ proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is / are subscribed to the within instrument and acknowledged to me that he / she / they executed the same in his / her / the authorized capacity(ies), and that by his / her / their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

WITNESS my hand and official seal.

Notary Public _____

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Attorney Docket No.: 071815/0477

In re patent application of:

Richard E. SKLAR et al.

Serial No.: Not yet assigned

Application for reissue of U.S.

**Patent No. 5,790,175,
granted August 4, 1998**

Filed: Herewith

**For: AIRCRAFT SATELLITE TELEVISION SYSTEM FOR DISTRIBUTING
TELEVISION PROGRAMMING DERIVED FROM DIRECT BROADCAST
SATELLITES**

**ASSOCIATE POWER OF ATTORNEY AND CHANGE OF
CORRESPONDENCE ADDRESS**

Assistant Commissioner for Patents
Washington, D.C. 20231

Sir:

The undersigned officer of Rockwell International Corporation hereby grants the following attorneys/agents associate power to prosecute the above-identified application and transact all business in the Patent and Trademark Office connected therewith:

Johnny A. Kumar, Reg. No. 34,649; Phillip J. Articola, Reg. No. 38,819; Joseph N. Ziebert, 35,421; other members of the law firm of Foley and Lardner; and Kyle Eppele, Reg. No. 34,155, of Rockwell International Corporation.

It is requested that all future correspondence be mailed to:

Kyle Eppele
Rockwell International Corporation
Intellectual Property Division
400 Collins Road NE, M/S/ 124/323
Cedar Rapids, Iowa 52498

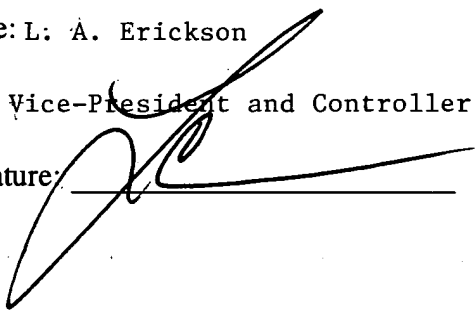
Respectfully submitted,

Date: June 28, 2000

Name: L. A. Erickson

Title: Vice-President and Controller

Signature: _____



004220" 56E/2960

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Attorney Docket No. 071815/477

In re reissue patent application of

Richard E. SKLAR et al.

Serial No: Not yet assigned

**Application for reissue of U.S. Patent No.
5,790,175, granted August 4, 1998**

Filed: Herewith

**For: AIRCRAFT SATELLITE TELEVISION SYSTEM FOR DISTRIBUTING
TELEVISION PROGRAMMING DERIVED FROM DIRECT BROADCAST
SATELLITES**

**BROADENING REISSUE DECLARATION
UNDER 37 C.F.R. §1.175**

**Assistant Commissioner for Patents
Washington, D.C. 20231**

Sir:

**We, Richard Sklar, Lawrence Girard, Ralph Phillipp, David Frankenbach,
Dickey Berry, and Jim Williams declare that:**

- 1. Our residence, post office address and citizenship are stated below next
to our names.**
- 2. We believe we are the original and first inventors of the subject matter
described and claimed in our U.S. Patent 5,790,175 and in the foregoing specification for
which a reissue patent is sought on the invention entitled AIRCRAFT SATELLITE
TELEVISION SYSTEM FOR DISTRIBUTING TELEVISION PROGRAMMING
DERIVED FROM DIRECT BROADCAST SATELLITES.**

002220 56622960

3. We have reviewed and understand the contents of the above-identified specification, including the claims.

4. We acknowledge the duty to disclose information which is material to examination of the application in accordance with 37 C.F.R. §1.56(a).

5. There are no foreign applications or inventors certificates having a filing date before that of the applications on which priority is claimed.

6. We believe U.S. Patent No. 5,790,175 ("the '175 patent") is wholly or partly inoperative or invalid by reason of our claiming less than we had the right to claim in the patent.

7. One specific error was for us not to include claims which recite:

(Reissue claim 15) A satellite television system that provides television programming in real time to passengers on an aircraft derived from at least one satellite, said system comprising:

a video and audio signal distribution system disposed on the aircraft, the video and audio signal distribution system being configured to distribute video and audio signals to the passengers on the aircraft;

a steerable antenna that is capable of being steered towards the at least one satellite in response to control signals supplied thereto;

an antenna controller that is coupled to the steerable antenna, the antenna controller being configured to provide the control signals to the steerable antenna, to steer the steerable antenna so that the steerable antenna is locked onto RF signals transmitted by the at least one satellite, and to downconvert the RF signals to provide downconverted RF signals that correspond to a plurality of programming channels; and

a receiver/decoder that is coupled to the antenna controller and to the video and audio signal distribution system, the antenna controller being configured to process the downconverted RF signals to provide video and audio signals corresponding to the plurality of programming channels, and to output the video and audio signals to the video and audio signal distribution system which distributes the plurality of programming channels in real time to the passengers.

(Reissue claim 16) The system of claim 15, wherein the downconverted RF signals correspond to left hand and right hand circularly polarized downconverted RF signals.

(Reissue claim 17) The system of claim 15, wherein the video and audio signal distribution system distributes video and audio television signals to the passengers.

(Reissue claim 18) The system of claim 15, wherein the antenna controller processes status signals derived from the steerable antenna to steer the steerable antenna.

(Reissue claim 19) A satellite television system that provides television programming in real time to passengers on an aircraft derived from at least one satellite, said system comprising:

a video and audio signal distribution system disposed on the aircraft, the video and audio signal distribution system being configured to distribute video and audio signals to the passengers on the aircraft;

a steerable antenna that is capable of being steered towards the at least one satellite in response to control signals supplied thereto;

an antenna controller that is coupled to the steerable antenna, the antenna controller being configured to provide the control signals to the steerable antenna, to steer the steerable antenna so that the steerable antenna is locked onto RF signals transmitted by the at least one satellite;

a downconverter that is coupled to the antenna controller and that downconverts the RF signals to provide downconverted RF signals that correspond to a plurality of programming channels; and

a receiver/decoder that is coupled to the downconverter and to the video and audio signal distribution system, the antenna controller being configured to process the

downconverted RF signals to provide video and audio signals corresponding to the plurality of programming channels, and to output the video and audio signals to the video and audio signal distribution system which distributes the plurality of programming channels in real time to the passengers.

8. By this reissue declaration, we desire to seek broadened claims, and, this application for reissue of the original Letters Patent addresses the aforementioned error by including new independent claim 15 which does not recite an unnecessary feature of providing antenna steering by way of feeding back status signals using a receiver/decoder and an unnecessary feature of the status signals for steering the antenna, by adding new dependent claims 16-18 to define the system of the present invention with the variety in scope and the degree of specificity necessary to adequately protect the invention, and by adding new independent claim 19 which does not recite an unnecessary feature of providing antenna steering by way of feeding back status signals using a receiver/decoder. Support for the new claims exist in Figure 1 of the Letters Patent and the accompanying description of that figure in the specification.

9. We believe that the errors recited above and being presented for correction in this reissue application arose without any deceptive intention on our part.

WHEREFORE, We pray that we may be allowed to surrender the original Letters Patent 5,722,500 and do hereby offer same.

We hereby appoint Stephen A. Bent, Reg. No. 29,768; David A. Blumenthal, Reg. No. 26,257; William T. Ellis, Reg. No. 26,874; John J. Feldhaus, Reg. No. 28,822; Patricia D. Granados, Reg. No. 33,683; John P. Isacson, Reg. No. 33,715; Peter G. Mack, Reg. No. 26,001; Brian J. McNamara, Reg. No. 32,789; Sybil Meloy, Reg. No. 22,749; George E. Quillin, Reg. No. 32,792; Colin G. Sandercock, Reg. No. 31,298; Bernhard D. Saxe, Reg. No. 28,665; Charles F. Schill, Reg. No. 27,590; Richard L. Schwaab, Reg. No. 25,479; Harold C. Wegner, Reg. No. 25,258, Johnny A. Kumar, Reg. No. 34,649, Phillip J. Articola, Reg. No. 38,819, Joseph N. Ziebert, Reg. No. 35,421, and Kyle Eppele, Reg. No. 34,155, as our attorneys with full power of substitution and revocation to prosecute this application and to transact all business in the U.S. Patent and Trademark Office connected herewith, and request that all correspondence be sent to FOLEY & LARDNER, 3000 K Street, N.W., Suite 500, Washington, DC 20007-5109 at (202) 672-5300.

The undersigned petitioners declare further that all statements made herein of their own knowledge are true, and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

Richard E. Sklar

Signature: Richard E. Sklar Date: 15 MAY 2000

Residence:

8121 DARTMOUTH DR

Post Office Address: HUNTINGTON BEACH, CA Citizenship: USA
92646

Lawrence E. Girard

Signature: Lawrence E. Girard Date: 19 MAY 2000

Residence:

15722 CROMWELL CIR

Post Office Address: WESTMINSTER Citizenship: USA
92683

Ralph P. Phillipp

Signature: Ralph P. Phillipp Date: 5/19/2000

Residence:

16062 DAVIS LANE

Post Office Address: Huntington Beach, CA Citizenship: USA

David C. Frankenbach

Signature: David C. Frankenbach Date: 5/22/00

Residence:

1609 West Rd

Post Office Address: Ladera Heights, CA Citizenship: USA

Dickey J. Berry

Signature: Dickey J. Berry Date: 6/20/00

Residence: 5787 VIA BARCELONA

Post Office Address: LA VERNE CA Citizenship: USA
91750

Jim C. Williams

Signature: _____ Date: _____

Residence: _____

Post Office Address: _____ Citizenship: _____

004220" 56E22960

Dickey J. Berry

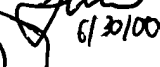
Signature: _____ Date: _____

Residence: _____

Post Office Address: _____ Citizenship: _____

Jim C. Williams

Signature:  Date: 6-30-00

Residence: 1755 N. Partridge St. Anaheim CA 

Post Office Address: - same - ← Citizenship: USA

00627395-072700